

AMENDMENTS TO THE CLAIMS

Please add Claims 85-126.

Please amend Claims 1, 6, 8, 12, 24, 29, 36, 40, 52, 57, 62, 64, 68, and 80 as follows:

1 1. (Currently amended) A process for scheduling the recording, storing, and deleting of
2 television and Web page program material on a storage medium in a computer environment,
3 comprising the steps of:

4 accepting as input a prioritized list of program viewing preferences;

5 wherein said list contains a viewer's explicit preferred program selections for
6 recording and inferred preferred program selections for recording;

7 comparing said list with ~~the~~ a database of program guide objects;

8 generating a schedule of time versus available storage space that is optimal for the
9 viewer's explicit or ~~derived~~ inferred preferred programs;

10 wherein said preferred programs include television broadcast programs and
11 Universal Resource Locators (URLs); and

12 wherein said program guide objects indicate when programs of interest are ~~actually~~
13 broadcast.

1 2. (Original) The process of claim 1, wherein the viewer may request that certain
2 programs be captured, which results in the highest possible priority for those programs.

1 3. (Original) The process of claim 1, wherein the viewer may explicitly express
2 preferences using appurtenances provided through the viewer interface.

1 4. (Original) The process of claim 1, wherein said preferences may be inferred from
2 viewing patterns.

1 5. (Original) The process of claim 1, wherein said preferences correspond to television
2 viewing objects stored in a replicated database.

1 6. (Currently amended) The process of claim 1, further comprising the steps of:
2 providing a space schedule;
3 providing an input schedule;
4 wherein said space schedule tracks all currently recorded programs and the programs
5 that have been scheduled to be recorded in the future; and
6 wherein said input schedule tracks the free and occupied time slots for each input
7 source.

1 7. (Original) The process of claim 6, wherein the amount of space available at any
2 given moment in time may be found by generating the sum of all occupied space or space
3 that will be occupied at that particular time, and subtracting that from the total capacity
4 available to store programs.

1 8. (Currently amended) The process of claim 1, wherein inferred programs previously
2 ~~scheduled for recording based on inferred preferences~~ automatically lose all conflict
3 decisions with explicit program selections.

1 9. (Original) The process of claim 1, wherein a program is recorded if at all times
2 between when the recording would be initiated and when it expires, sufficient space is
3 available to hold it.

1 10. (Original) The process of claim 6, wherein there must be an input available from
2 which to record for the duration of the program.

1 11. (Original) The process of claim 6, wherein only those inputs from which the desired
2 program can be recorded are considered during scheduling.

1 12. (Currently amended) The process of claim 1, further comprising the step of:
2 generating an ordered list of showings of ~~the a~~ program of interest.

1 13. (Original) The process of claim 12, wherein each showing in said list **is** checked to
2 see if input or space conflicts occur.

1 14. (Original) The process of claim 12, wherein if a showing is found with **no** conflicts,
2 then the program is scheduled for recording for said showing.

1 15. (Original) The process of claim 12, further comprising the step of:
2 sorting said list of showings; and
3 wherein the ordering of said list results in the viewer being presented with any
4 conflicting programs in order from least impact on scheduled programs to greatest.

1 16. (Original) The process of claim 15, wherein for each candidate showing in said list,
2 the viewer is presented with the option of shortening the expiration dates on conflicting
3 programs.

1 17. (Original) The process of claim 15, wherein the viewer is presented with the option
2 to cancel each previously scheduled recording that has an input conflict with the desired
3 program.

1 18. (Original) The process of claim 1, further comprising the step of:
2 providing a background scheduler.

1 19. (Original) The process of claim 18, wherein said background scheduler schedules
2 each preferred program in turn until the list of preferred programs is exhausted or no further
3 opportunity to record is available.

1 20. (Original) The process of claim 18, wherein a preferred program is scheduled if and
2 only if there are no conflicts with other scheduled programs□

1 21. (Original) The process of claim 18, wherein a preferred program which has been
2 scheduled may be deleted if it conflicts with an explicit selection or if a change in viewer
3 preferences identifies a higher priority program that could be recorded at that time.

1 22. (Original) The process of claim 1, wherein all conflicts are resolved as early as
2 possible.

1 23. (Original) The process of claim 1, wherein any schedule conflicts are determined
2 immediately when the viewer makes an explicit selection of a program to record.

1 24. (Currently amended) The process of claim 1, wherein if there are schedule conflicts
2 with other programs that the viewer has explicitly selected, the viewer is asked which
3 scheduled recordings should be canceled and which should be completed.

1 25. (Original) The process of claim 4, wherein schedule conflicts between explicit
2 program selections and inferred "fuzzy" program selections are resolved in favor of said
3 explicit selections without asking the viewer.

1 26. (Original) The process of claim 1, wherein the expiration time of any conflicting
2 stored programs is shortened to exactly that needed to allow recording of a desired program.

1 27. (Original) The process of claim 1, wherein schedule conflicts resulting from the
2 recording of aggregate objects are resolved using the preference weighting of the programs
3 involved.

1 28. (Original) The process of claim 1, wherein if multiple conflicts are caused by a
2 particular program in an aggregate object, it will only be recorded if its preference exceeds
3 that of all conflicting programs.

1 29. (Currently amended) An apparatus for scheduling the recording, storing, and
2 deleting of television and Web page program material on a storage medium in a computer
3 environment, comprising:

4 a module for accepting as input a prioritized list of program viewing preferences;
5 wherein said list contains a viewer's explicit preferred program selections for
6 recording and derived preferred program selections for recording;

7 a module for comparing said list with ~~the~~ a database of program guide objects;
8 a module for generating a schedule of time versus available storage space that is
9 optimal for the viewer's explicit or ~~derived~~ inferred preferred programs;

10 wherein said preferred programs include television broadcast programs and
11 Universal Resource Locators (URLs); and

12 wherein said program guide objects indicate when programs of interest are ~~actually~~
13 broadcast.

1 30. (Original) The apparatus of claim 29, wherein the viewer may request that certain
2 programs be captured, which results in the highest possible priority for those programs.

1 31. (Original) The apparatus of claim 29, wherein the viewer may explicitly express
2 preferences using appurtenances provided through the viewer interface.

1 32. (Original) The apparatus of claim 29, wherein said preferences may be inferred
2 from viewing patterns.

1 33. (Original) The apparatus of claim 29, wherein said preferences correspond to
2 television viewing objects stored in a replicated database.

1 34. (Original) The apparatus of claim 29, further comprising:
2 a space schedule;
3 an input schedule;
4 wherein said space schedule tracks all currently recorded programs and the programs
5 that have been scheduled to be recorded in the future; and
6 wherein said input schedule tracks the free and occupied time slots for each input
7 source.

1 35. (Original) The apparatus of claim 34, wherein the amount of space available at any
2 given moment in time may be found by generating the sum of all occupied space or space
3 that will be occupied at that particular time, and subtracting that from the total capacity
4 available to store programs.

1 36. (Currently amended) The apparatus of claim 29, wherein inferred programs
2 previously scheduled for recording ~~based on inferred preferences~~ automatically lose all
3 conflict decisions with explicit program selections.

1 37. (Original) The apparatus of claim 29, wherein a program is recorded if at all times
2 between when the recording would be initiated and when it expires, sufficient space is
3 available to hold it.

1 38. (Original) The apparatus of claim 34, wherein there must be an input available from
2 which to record for the duration of the program.

1 39. (Original) The apparatus of claim 34, wherein only those inputs from which the
2 desired program can be recorded are considered during scheduling.

1 40. (Currently amended) The apparatus of claim 29, further comprising:
2 generating an ordered list of showings of ~~the a~~ program of interest.

1 41. (Original) The apparatus of claim 40, wherein each showing in said list is checked
2 to see if input or space conflicts occur.

1 42. (Original) The apparatus of claim 40, wherein if a showing is found with no
2 conflicts, then the program is scheduled for recording for said showing.

1 43. (Original) The apparatus of claim 40, further comprising:
2 sorting said list of showings; and
3 wherein the ordering of said list results in the viewer being presented with any
4 conflicting programs in order from least impact on scheduled programs to greatest.

1 44. (Original) The apparatus of claim 43, wherein for each candidate showing in said
2 list, the viewer is presented with the option of shortening the expiration dates on conflicting
3 programs.

1 45. (Original) The apparatus of claim 43, wherein the viewer is presented with the
2 option to cancel each previously scheduled recording that has an input conflict with the
3 desired program.

1 46. (Original) The apparatus of claim 29, further comprising:
2 a background scheduler.

1 47. (Original) The apparatus of claim 46, wherein said background scheduler schedules
2 each preferred program in turn until the list of preferred programs is exhausted or no further
3 opportunity to record is available.

1 48. (Original) The apparatus of claim 46, wherein a preferred program is scheduled if
2 and only if there are no conflicts with other scheduled programs.

1 49. (Original) The apparatus of claim 46, wherein a preferred program which has been
2 scheduled may be deleted if it conflicts with an explicit selection or if a change in viewer
3 preferences identifies a higher priority program that could be recorded at that time.

1 50. (Original) The apparatus of claim 29, wherein all conflicts are resolved as early as
2 possible.

1 51. (Original) The apparatus of claim 29, wherein any schedule conflicts are determined
2 immediately when the viewer makes an explicit selection of a program to record.

1 52. (Currently amended) The apparatus of claim 29, wherein if there are schedule
2 conflicts with other programs that the viewer has explicitly selected, the viewer is asked
3 which scheduled recordings should be canceled and which should be completed.

1 53. (Original) The apparatus of claim 32, wherein schedule conflicts between explicit
2 program selections and inferred "fuzzy" program selections are resolved in favor of said
3 explicit selections without asking the viewer.

1 54. (Original) The apparatus of claim 29, wherein the expiration time of any conflicting
2 stored programs is shortened to exactly that needed to allow recording of a desired program.

1 55. (Original) The apparatus of claim 29, wherein schedule conflicts resulting from the
2 recording of aggregate objects are resolved using the preference weighting of the programs
3 involved.

1 56. (Original) The apparatus of claim 29, wherein if multiple conflicts are caused by a
2 particular program in an aggregate object, it will only be recorded if its preference exceeds
3 that of all conflicting programs.

1 57. (Currently amended) A program storage medium readable by a computer, tangibly
2 embodying a program of instructions executable by the computer to perform method steps
3 for scheduling the recording, storing, and deleting of television and Web page program
4 material on a storage medium in a computer environment, comprising the steps of:
5 accepting as input a prioritized list of program viewing preferences;

6 wherein said list contains a viewer's explicit preferred program selections for
7 recording and derived preferred program selections for recording;
8 comparing said list with the a database of program guide objects;
9 generating a schedule of time versus available storage space that is optimal for the
10 viewer's explicit or derived inferred preferred programs;
11 wherein said preferred programs include television broadcast programs and
12 Universal Resource Locators (URLs); and
13 wherein said program guide objects indicate when programs of interest are actually
14 broadcast.

1 58. (Original) The method of claim 57, wherein the viewer may request that certain
2 programs be captured, which results in the highest possible priority for those programs.

1 59. (Original) The method of claim 57, wherein the viewer may explicitly express
2 preferences using appurtenances provided through the viewer interface.

1 60. (Original) The method of claim 57, wherein said preferences may be inferred from
2 viewing patterns.

1 61. (Original) The method of claim 57, wherein said preferences correspond to
2 television viewing objects stored in a replicated database.

1 62. (Currently amended) The method of claim 57, further comprising the steps of:
2 providing a space schedule;

3 providing an input schedule;
4 wherein said space schedule tracks all currently recorded programs and the programs
5 that have been scheduled to be recorded in the future; and
6 wherein said input schedule tracks the free and occupied time slots for each input
7 source.

1 63. (Original) The method of claim 62, wherein the amount of space available at any
2 given moment in time may be found by generating the sum of all occupied space or space
3 that will be occupied at that particular time, and subtracting that from the total capacity
4 available to store programs.

1 64. (Currently amended) The method of claim 57, wherein inferred programs previously
2 scheduled for recording ~~based on inferred preferences~~ automatically lose ~~all~~ conflict
3 decisions with explicit program selections.

1 65. (Original) The method of claim 57, wherein a program is recorded if at all times
2 between when the recording would be initiated and when it expires, sufficient space is
3 available to hold it.

1 66. (Original) The method of claim 62, wherein there must be an input available from
2 which to record for the duration of the program.

1 67. (Original) The method of claim 62, wherein only those inputs from which the
2 desired program can be recorded are considered during scheduling.

1 68. (Currently amended) The method of claim 57, further comprising the step of:
2 generating an ordered list of showings of ~~the a~~ program of interest.

1 69. (Original) The method of claim 68, wherein each showing in said list is checked to
2 see if input or space conflicts occur.

1 70. (Original) The method of claim 68, wherein if a showing is found with no conflicts,
2 then the program is scheduled for recording for said showing.

1 71. (Original) The method of claim 68, further comprising the step of:
2 sorting said list of showings; and
3 wherein the ordering of said list results in the viewer being presented with any
4 conflicting programs in order from least impact on scheduled programs to greatest.

1 72. (Original) The method of claim 71, wherein for each candidate showing in said list,
2 the viewer is presented with the option of shortening the expiration dates on conflicting
3 programs.

1 73. (Original) The method of claim 71, wherein the viewer is presented with the option
2 to cancel each previously scheduled recording that has an input conflict with the desired
3 program.

1 74. (Original) The method of claim 57, further comprising the step of:

2 providing a background scheduler.

1 75. (Original) The method of claim 74, wherein said background scheduler schedules
2 each preferred program in turn until the list of preferred programs is exhausted or no further
3 opportunity to record is available.

1 76. (Original) The method of claim 74, wherein a preferred program is scheduled if and
2 only if there are no conflicts with other scheduled programs.

1 77. (Original) The method of claim 74, wherein a preferred program which has been
2 scheduled may be deleted if it conflicts with an explicit selection or if a change in viewer
3 preferences identifies a higher priority program that could be recorded at that time.

1 78. (Original) The method of claim 57, wherein all conflicts are resolved as early as
2 possible.

1 79. (Original) The method of claim 57, wherein any schedule conflicts are determined
2 immediately when the viewer makes an explicit selection of a program to record.

1 80. (Currently amended) The method of claim 57, wherein if there are schedule conflicts
2 with other programs that the viewer has explicitly selected, the viewer is asked which
3 scheduled recordings should be canceled and which should be completed.

1 81. (Original) The method of claim 60, wherein schedule conflicts between explicit
2 program selections and inferred "fuzzy" program selections are resolved in favor of said
3 explicit selections without asking the viewer.

1 82. (Original) The method of claim 57, wherein the expiration time of any conflicting
2 stored programs is shortened to exactly that needed to allow recording of a desired program.

1 83. (Original) The method of claim 57, wherein schedule conflicts resulting from the
2 recording of aggregate objects are resolved using the preference weighting of the programs
3 involved.

1 84. (Original) The method of claim 57, wherein if multiple conflicts are caused by a
2 particular program in an aggregate object, it will only be recorded if its preference exceeds
3 that of all conflicting programs.

1 85. (New) A process for scheduling the recording, storing, and deleting of television and
2 Web page program material on a storage medium, comprising:

3 creating a prioritized list of programs to be recorded;

4 wherein said list contains a viewer's explicit program selections for recording and
5 inferred program selections for recording;

6 comparing said list with a database of program guide objects;

7 wherein said program guide objects indicate when programs are broadcast or
8 transmitted;

9 determining storage medium memory space and input scheduling conflicts between
10 programs in said list and programs that have been scheduled to be recorded in the future;
11 wherein said determining step generates a schedule of time versus available storage
12 medium memory space that is optimal for the viewer's explicit or inferred programs; and
13 scheduling programs in said list to be recorded that do not have storage medium
14 memory space and input conflicts with other scheduled programs.

1 86. (New) The process of claim 85, wherein the viewer may explicitly request that
2 certain programs be captured, which results in the highest possible priority for those
3 programs.

1 87. (New) The process of claim 85, wherein said inferred program selections may be
2 inferred from the viewer's viewing patterns.
3

1 88. (New) The process of claim 85, wherein said inferred program selections are inferred
2 from the viewer's indicated preferences.
3

1 89. (New) The process of claim 85, wherein inferred programs already scheduled for
2 recording automatically lose conflict decisions with explicit program selections.
3

1 90. (New) The process of claim 85, wherein a program is recorded if at all times
2 between when the recording would be initiated and when it expires, sufficient storage
3 medium space is available to hold it.

1 91. (New) The process of claim 85, wherein there must be an input available from which
2 to record for the duration of the program.

1 92. (New) The process of claim 85, wherein only those inputs from which the desired
2 program can be recorded are considered during scheduling.

1 93. (New) The process of claim 85, further comprising:
2 deriving a list of showings of a program of interest from said program guide;
3 wherein said determining step checks the list of showings for an inferred program
4 selection in an attempt to find a showing of said inferred program that does not have any
5 conflicts; and
6 wherein if a showing is found with no conflicts, then the inferred program is
7 scheduled for recording for said showing.

1 94. (New) The process of claim 85, further comprising:
2 deriving a list of showings of a program of interest from said program guide;
3 wherein said determining step checks the list of showings for an explicit program
4 selection in an attempt to find a showing of said explicit program that does not have any
5 conflicts; and
6 wherein if a showing is found with no conflicts, then the explicit program is
7 scheduled for recording for said showing.

1 95. (New) The process of claim 85, wherein the viewer is presented with an option to
2 cancel each previously scheduled recording that has an input conflict with one of the
3 viewer's explicit program selections.

1 96. (New) The process of claim 85, wherein the viewer is presented with an option to
2 shorten each previously recorded program's expiration date that has a storage medium
3 memory space conflict with one of the viewer's explicit program selections.

1 97. (New) The process of claim 96, wherein the viewer's explicit program selection is
2 scheduled to be recorded if the viewer shortens each of the previously recorded program's
3 expiration dates that have a storage medium memory space conflict with the viewer's
4 explicit program selection.

1 98. (New) The process of claim 85, wherein if any previously scheduled programs
2 conflict with an explicit program selection, then the viewer is asked which previously
3 scheduled program should be canceled and which should be completed.

1 99. (New) An apparatus for scheduling the recording, storing, and deleting of television
2 and Web page program material on a storage medium, comprising:
3 a module for creating a prioritized list of programs to be recorded;
4 wherein said list contains a viewer's explicit program selections for recording and
5 inferred program selections for recording;
6 a module for comparing said list with a database of program guide objects;

7 wherein said program guide objects indicate when programs are broadcast or
8 transmitted;

9 a module for determining storage medium memory space and input scheduling
10 conflicts between programs in said list and programs that have been scheduled to be
11 recorded in the future;

12 wherein said determining module generates a schedule of time versus available
13 storage medium memory space that is optimal for the viewer's explicit or inferred programs;
14 and

15 a module for scheduling programs in said list to be recorded that do not have storage
16 medium memory space and input conflicts with other scheduled programs.

1 100. (New) The apparatus of claim 99, wherein the viewer may explicitly request that
2 certain programs be captured, which results in the highest possible priority for those
3 programs.

1 101. (New) The apparatus of claim 99, wherein said inferred program selections may be
2 inferred from the viewer's viewing patterns.

3

1 102. (New) The apparatus of claim 99, wherein said inferred program selections are
2 inferred from the viewer's indicated preferences.

3

1 103. (New) The apparatus of claim 99, wherein inferred programs already scheduled for
2 recording automatically lose conflict decisions with explicit program selections.

1 104. (New) The apparatus of claim 99, wherein a program is recorded if at all times
2 between when the recording would be initiated and when it expires, sufficient storage
3 medium space is available to hold it.

1 105. (New) The apparatus of claim 99, wherein there must be an input available from
2 which to record for the duration of the program.

1 106. (New) The apparatus of claim 99, wherein only those inputs from which the desired
2 program can be recorded are considered during scheduling.

1 107. (New) The apparatus of claim 99, further comprising:
2 a module for deriving a list of showings of a program of interest from said program
3 guide;
4 wherein said determining module checks the list of showings for an inferred program
5 selection in an attempt to find a showing of said inferred program that does not have any
6 conflicts; and
7 wherein if a showing is found with no conflicts, then the inferred program is
8 scheduled for recording for said showing.

1 108. (New) The apparatus of claim 99, further comprising:
2 a module for deriving a list of showings of a program of interest from said program
3 guide;

4 wherein said determining module checks the list of showings for an explicit program
5 selection in an attempt to find a showing of said explicit program that does not have any
6 conflicts; and

7 wherein if a showing is found with no conflicts, then the explicit program is
8 scheduled for recording for said showing.

1 109. (New) The apparatus of claim 99, wherein the viewer is presented with an option to
2 cancel each previously scheduled recording that has an input conflict with one of the
3 viewer's explicit program selections.

1 110. (New) The apparatus of claim 99, wherein the viewer is presented with an option to
2 shorten each previously recorded program's expiration date that has a storage medium
3 memory space conflict with one of the viewer's explicit program selections.

1 111. (New) The apparatus of claim 110, wherein the viewer's explicit program selection
2 is scheduled to be recorded if the viewer shortens each of the previously recorded program's
3 expiration dates that have a storage medium memory space conflict with the viewer's
4 explicit program selection.

1 112. (New) The apparatus of claim 99, wherein if any previously scheduled programs
2 conflict with an explicit program selection, then the viewer is asked which previously
3 scheduled program should be canceled and which should be completed.

1 113. (New) A program storage medium readable by a computer, tangibly embodying a
2 program of instructions executable by the computer to perform method steps for scheduling
3 the recording, storing, and deleting of television and Web page program material on a
4 storage medium, comprising:

5 creating a prioritized list of programs to be recorded;

6 wherein said list contains a viewer's explicit program selections for recording and
7 inferred program selections for recording;

8 comparing said list with a database of program guide objects;

9 wherein said program guide objects indicate when programs are broadcast or
10 transmitted;

11 determining storage medium memory space and input scheduling conflicts between
12 programs in said list and programs that have been scheduled to be recorded in the future;

13 wherein said determining step generates a schedule of time versus available storage
14 medium memory space that is optimal for the viewer's explicit or inferred programs; and

15 scheduling programs in said list to be recorded that do not have storage medium
16 memory space and input conflicts with other scheduled programs.

1 114. (New) The method of claim 113, wherein the viewer may explicitly request that
2 certain programs be captured, which results in the highest possible priority for those
3 programs.

1 115. (New) The method of claim 113, wherein said inferred program selections may be
2 inferred from the viewer's viewing patterns.

3

1 116. (New) The method of claim 113, wherein said inferred program selections are
2 inferred from the viewer's indicated preferences.

3

1 117. (New) The method of claim 113, wherein inferred programs already scheduled for
2 recording automatically lose conflict decisions with explicit program selections.

1 118. (New) The method of claim 113, wherein a program is recorded if at all times
2 between when the recording would be initiated and when it expires, sufficient storage
3 medium space is available to hold it.

1 119. (New) The method of claim 113, wherein there must be an input available from
2 which to record for the duration of the program.

1 120. (New) The method of claim 113, wherein only those inputs from which the desired
2 program can be recorded are considered during scheduling.

1 121. (New) The method of claim 113, further comprising:
2 deriving a list of showings of a program of interest from said program guide;
3 wherein said determining step checks the list of showings for an inferred program
4 selection in an attempt to find a showing of said inferred program that does not have any
5 conflicts; and
6 wherein if a showing is found with no conflicts, then the inferred program is
7 scheduled for recording for said showing.

1 122. (New) The method of claim 113, further comprising:
2 deriving a list of showings of a program of interest from said program guide;
3 wherein said determining step checks the list of showings for an explicit program
4 selection in an attempt to find a showing of said explicit program that does not have any
5 conflicts; and

6 wherein if a showing is found with no conflicts, then the explicit program is
7 scheduled for recording for said showing.

1 123. (New) The method of claim 113, wherein the viewer is presented with an option to
2 cancel each previously scheduled recording that has an input conflict with one of the
3 viewer's explicit program selections.

1 124. (New) The method of claim 113, wherein the viewer is presented with an option to
2 shorten each previously recorded program's expiration date that has a storage medium
3 memory space conflict with one of the viewer's explicit program selections.

1 125. (New) The method of claim 124, wherein the viewer's **explicit** program selection is
2 scheduled to be recorded if the viewer shortens each of the previously recorded program's
3 expiration dates that have a storage medium memory space **conflict** with the viewer's
4 **explicit** program selection.

1 126. (New) The method of claim 113, wherein if any previously scheduled programs
2 conflict with an explicit program selection, then the viewer is asked which previously
3 scheduled program should be canceled and which should be completed.